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The Level of Ferritin in Diabetic and Nondiabetic Patients with Acute Myocardial Infarction

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Abstract: An elevated serum ferritin level is proposed as a risk factor for coronary heart disease. The role of diabetes mellitus on serum ferritin levels in myocardial infarction has recently been investigated. The purpose of this study was to assess the effects of diabetes mellitus on serum ferritin levels in patients with acute myocardial infarction (AMI). In this study, we studied patients (104 nondiabetic, 26 diabetic patients) with acute myocardial infarction (AMI). AMI was diagnosed according to typical clinical history, ECG changes and cardiac enzyme elevations. Blood samples for ferritin, iron and total iron binding capacity (TIBC) and haemogram tests were obtained in the morning within the first 3 consecutive days and were measured by immunoradiometric assay (IRMA), ferrene assay and ferrozine assay respectively. Whole blood (K₃ EDTA as anticoagulant) was analyzed using Beckman Coulter Hmx hematology. The comparison of groups and subgroups was done using one-way varians analysis (ANOVA) and Tukey's Multiple Comparison Test respectively, while the unpaired t test and the Mann Whitney U test were used for the analysis of the 2 groups and the qualificational data were analyzed using the chi square test . Serum ferritin levels were significantly increased in the diabetic group. The results were evaluated with a 95% safety margin (P < 0. 05). In the presence of diabetes mellitus, serum ferritin levels may be elevated, which may increase the risk of coronary heart disease.

Key Words: Ferritin, Diabetes Mellitus, Myocardial Infarction

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